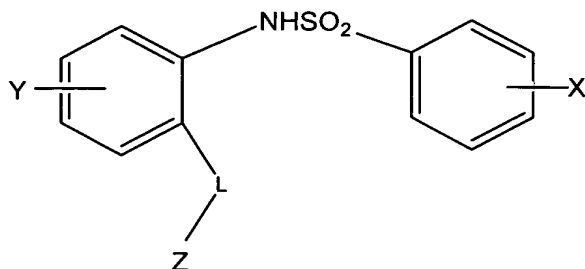


We claim:

1. A compound of the formula (I), or a salt thereof:



where

X represents from 1 to 4 substituents independently selected from the group consisting of halogen, -CN, -NO₂, -OH, -OR¹, -C(O)R¹, -CO₂R¹, -O(CO)R¹, -C(O)NR¹R², -OC(O)NR¹R², -SR¹, -SOR¹, -SO₂R¹, -SO₂NR¹R², -NR¹R², -NR¹C(O)R², -NR¹C(O)₂R², -NR¹SO₂R², -NR¹(CO)NR²R³, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₆₋₁₀ aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl;

R¹, R² and R³ are each independently selected from the group consisting of hydrogen, unsubstituted or substituted C₁₋₆ haloalkyl, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₃₋₆ cycloalkyl, unsubstituted or substituted C₂₋₆ alkenyl, unsubstituted or substituted C₂₋₆ alkynyl, unsubstituted or substituted C₆₋₁₀ aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, unsubstituted or substituted aryl-C₁₋₄ alkyl, unsubstituted or substituted aryl-C₁₋₄ alkyl, and unsubstituted or substituted aryloxy-C₁₋₄ alkyl; or two of R¹, R² and R³ together with the atom(s) to which they are attached, may form an unsubstituted or substituted 5-, 6- or 7-membered ring;

Y represents from 1 to 3 substituents, each independently selected from the group consisting of halogen, -CN, -NO₂, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴, and unsubstituted or substituted C₁₋₄ alkyl;

R⁴ is selected from the group consisting of hydrogen, unsubstituted or substituted C₁₋₆ haloalkyl, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₃₋₆ cycloalkyl, unsubstituted or substituted C₂₋₆ alkenyl, and unsubstituted or substituted C₂₋₆ alkynyl;

L is -C(O)-, -S-, -SO- or -S(O)₂-; and

Z represents either unsubstituted or substituted monocyclic or bicyclic C₅₋₁₀ heteroaryl or unsubstituted or substituted monocyclic or bicyclic C₃₋₁₀ heterocyclyl,

with the proviso that when X is methyl, then Z is not 2-thiophene, 2-(3-hydroxy-1H-indole) or 3-(1-methylpyridinium).

2. The compound of claim 1, where L is -CO-.

3. The compound of claim 2, where X represents from 1 to 3 substituents independently selected from the group consisting of halogen, -CN, -NO₂, -OH, -OR¹, -C(O)R¹, -CO₂R¹, -O(CO)R¹, -OC(O)NR¹R², -SR¹, -SOR¹, -SO₂R¹, -NR¹R², -NR¹C(O)R², -NR¹C(O)₂R², -NR¹(CO)NR¹R², unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₆₋₁₀ aryl, unsubstituted or substituted 5- or 6-membered heteroaryl, or unsubstituted or substituted 4- to 7-membered heterocyclyl.

4. The compound of claim 3, where X represents 1 to 3 substituents independently selected from the group consisting of -NO₂, -OR¹, -C(O)R¹, -SO₂R¹, -NR¹R², unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, or unsubstituted or substituted 5- or 6-membered heterocyclyl.

5. The compound of claim 2, where at least one X substituent is situated *para* to the sulfonamido bond as defined in formula (I).
6. The compound of claim 2, where X is unsubstituted C₁₋₈ alkyl, unsubstituted C₃₋₈ cycloalkyl, unsubstituted C₂₋₈ alkenyl, or unsubstituted C₂₋₈ alkynyl.
7. The compound of claim 2, where X is substituted C₁₋₈ alkyl, substituted C₃₋₈ cycloalkyl, substituted C₂₋₈ alkenyl, or substituted C₂₋₈ alkynyl, each having from 1 to 5 substituents independently selected from the group consisting of halogen, -OH, -CN, -NO₂, =O, -OC(O)R¹, -OR¹, -C(O)R¹, -CONR¹R², -OC(O)NR¹R², -NR²C(O)R¹, -NR¹C(O)NR²R³, -CO₂R¹, -NR¹R², -NR²CO₂R¹, -SR¹, -SOR¹, -SO₂R¹, -SO₂NR¹R², -NR¹SO₂R², unsubstituted or substituted aryl, unsubstituted or substituted heteroaryl, and unsubstituted or substituted heterocyclyl.
8. The compound of claim 7, where X is substituted C₁₋₈ alkyl or substituted C₃₋₈ cycloalkyl, each having from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -CN, =O, -OC(O)R¹, -OR¹, -C(O)R¹, -CONR¹R², -NR²C(O)R¹, -CO₂R¹, -NR¹R², -SR¹, -SOR¹, -SO₂R¹, -NR¹SO₂R², unsubstituted or substituted aryl, and unsubstituted or substituted heteroaryl.
9. The compound of claim 8, where X is substituted C₁₋₈ alkyl, having from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -CN, =O, -OC(O)R¹, -OR¹, -C(O)R¹, -CONR¹R², -NR²C(O)R¹, -CO₂R¹, -NR¹R², -SO₂R¹, unsubstituted or substituted aryl, and unsubstituted or substituted heteroaryl.
10. The compound of claim 2, where X is unsubstituted or substituted C₆₋₁₀ aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, or unsubstituted or substituted 3- to 10-membered heterocyclyl, where when X is substituted is has from 1 to 4 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C₁₋₈ alkyl,

unsubstituted or substituted C₁₋₈ haloalkyl, -CN, -NO₂, -OH, -OR¹, =O, -OC(O)R¹, -CO₂R¹, -C(O)R¹, -CONR¹R², -OC(O)NR¹R², -NR²C(O)R¹, -NR¹C(O)NR²R³, -NR¹R², -NR²CO₂R¹, -SR¹, -SOR¹, -SO₂R¹, -SO₂NR¹R², and -NR¹SO₂R².

11. The compound of claim 10, where X is substituted C₆₋₁₀ aryl or unsubstituted or substituted 5- to 10-membered heteroaryl, where when X is substituted it has from 1 to 3 substituents independently selected from the group consisting of halogen, -CN, -OH, -OR¹, =O, -OC(O)R¹, -CO₂R¹, -C(O)R¹, -CONR¹R², -NR²C(O)R¹, -NR¹R², -SR¹, -SOR¹, -SO₂R¹, -NR¹SO₂R², unsubstituted or substituted C₁₋₈ alkyl, and C₁₋₈ unsubstituted or substituted haloalkyl.

12. The compound of claim 11, where X is unsubstituted or substituted phenyl or unsubstituted or substituted 5- or 6-membered heteroaryl, where when X is substituted it has from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR¹, -C(O)R¹, -CONR¹R², -NR²C(O)R¹, -NR¹R², -SO₂R¹, unsubstituted or substituted C₁₋₈ alkyl, and unsubstituted or substituted C₁₋₈ haloalkyl.

13. The compound of claim 10, where X is unsubstituted or substituted 4- to 7-membered heterocyclyl, where when X is substituted it has from 1 to 3 substituents independently selected from the group consisting of C₁₋₈ alkyl, C₁₋₈ haloalkyl, -OR¹, -OH, -OC(O)R¹, -CO₂R¹, -C(O)R¹, -CONR¹R², -NR¹R², -SO₂R¹, and -NR¹SO₂R².

14. The compound of claim 13, where X is a unsubstituted or substituted 5- or 6-membered heterocyclyl, where when X is substituted it has 1 to 2 substituents independently selected from the group consisting of unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₁₋₈ haloalkyl, -OR¹, -OH, -C(O)R¹, -CONR¹R², -NR¹R², and -SO₂R¹.

15. The compound of claim 2, where R¹, R² and R³ are unsubstituted.

16. The compound of claim 2, where R^1 , R^2 and R^3 , when substituted, can have from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR', -OCOHNR', -OCONR'₂, -SH, -SR', -SO₂NH₂, -CONH₂, -NHC(O)NH₂, NR'C(O)NH₂, -CO₂H, -CN, -NO₂, -NH₂, -NHR' and -NR'₂, -S(O)R', -S(O)₂R', -CO₂R', -CONR'₂, -CONHR', -C(O)R', -NR'COR', -NHCOR', -NR'CO₂R', -NHCO₂R', -CO₂R', -NR'C(O)NR'₂, -NHC(O)NR'₂, -NR'C(O)NHR', -NHC(O)NHR', -NR'SO₂R', -NHSO₂R', -SO₂NR'₂, and -SO₂NHR', where R' is C₁₋₆alkyl.

17. The compound of claim 2, where Y represents from 1 to 2 substituents, each independently selected from the group consisting of halogen, -CN, -NO₂, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴, and unsubstituted or substituted C₁₋₄ alkyl.

18. The compound of claim 2, where Y represents from 1 to 3 substituents independently selected from the group consisting of halogen, -CN, -NO₂, -OR⁴, -C(O)R⁴, -SR⁴, -CF₃, -SOR⁴, and -SO₂R⁴.

19. The compound of claim 18, where Y represents from 1 to 3 substituents independently selected from the group consisting of halogen, -CN, -NO₂, -CF₃, and -SO₂R⁴.

20. The compound of claim 18, where Y represents 1 or 2 substituents where at least halogen is present and optionally another substituent selected from the group consisting of halogen, -CN, -NO₂, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴ and unsubstituted or substituted C₁₋₄ alkyl.

21. The compound of claim 2, where at least one Y substituent is located *para* to the sulfonamide bond as defined in formula (I), and one Y substituent is halogen.

22. The compound of claim 18, where Y is unsubstituted C₁₋₄ alkyl.

23. The compound of claim 18, where Y is substituted C₁₋₄ alkyl, having from 1 to 3 substituents independently selected from the group consisting of

halogen, -OH, -OR⁴, -CN, -NO₂, =O, -OC(O)R⁴, -CO₂R⁴, -C(O)R⁴, -CONR⁴R⁵, -OC(O)NR⁴R⁵, -NR⁴C(O)R⁵, -NR⁴C(O)NR⁵R⁶, -NR⁴R⁵, -NR⁴CO₂R⁵, -SR⁴, -SOR⁴, -SO₂R⁴, -SO₂NR⁴R⁵, and -NR⁴SO₂R⁵,

where R⁴, R⁵ and R⁶ are each independently selected from the group consisting of hydrogen, unsubstituted or substituted C₁₋₆ haloalkyl, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₃₋₆ cycloalkyl, unsubstituted or substituted C₂₋₆ alkenyl, and unsubstituted or substituted C₂₋₆ alkynyl; or where any two of R⁴, R⁵ and R⁶ together with the atom(s) to which they are attached, may form a 5-, 6- or 7-membered ring.

24. The compound of claim 23, where Y is substituted C₁₋₄ alkyl, having from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR⁴, -CN, -NO₂, =O, -OC(O)R⁴, -CO₂R⁴, -C(O)R⁴, -CONR⁴R⁵, -NR⁴C(O)R⁵, -NR⁴R⁵, -NR⁴, -SR⁴, -SOR⁴, -SO₂R⁴, and -NR⁴SO₂R⁵.

25. The compound of claim 23, where R⁴, R⁵ and R⁶ are unsubstituted.

26. The compound of claim 23, where R⁴, R⁵ and R⁶, when substituted, can have from with from 1 to 3 substituents independently selected from the group consisting of -OH, -OR', -SH, -SR', -SO₂NH₂, -CONH₂, -NHC(O)NH₂, N(C₁₋₆alkyl)C(O)NH₂, -CO₂H, -CN, -NO₂, -NH₂, -NHR', -NR'₂, -S(O)R', -S(O)₂R', -CO₂R', -CONHR', -CONR'₂, and -C(O)R', where R' is C₁₋₆alkyl.

27. The compound of claim 2, where Z represents unsubstituted, monocyclic or bicyclic C₅₋₁₀ heteroaryl or unsubstituted, monocyclic or bicyclic C₃₋₁₀ heterocyclyl.

28. The compound of claim 2, where Z is substituted, monocyclic or bicyclic C₅₋₁₀ heteroaryl or substituted, monocyclic or bicyclic C₃₋₁₀ heterocyclyl, having from 1 to 5 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₁₋₈ cycloalkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted

C₁₋₈ alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted C₆₋₁₀ aryl, unsubstituted or substituted heteroaryl and unsubstituted or substituted heterocyclyl;

where R⁷, R⁸ and R⁹ are each independently hydrogen, unsubstituted or substituted C₁₋₆ haloalkyl, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₃₋₆ cycloalkyl, unsubstituted or substituted C₂₋₆ alkenyl, unsubstituted or substituted C₂₋₆ alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heteroaryl, unsubstituted or substituted aryl-C₁₋₄ alkyl, and unsubstituted or substituted aryloxy-C₁₋₄ alkyl; or

where any two of R⁷, R⁸ and R⁹ together with the atom(s) to which they are attached, may form a 5-, 6- or 7- membered ring.

29. The compound of claim 2, where Z represents an unsubstituted 5- or 6-membered heteroaryl.

30. The compound of claim 2, where Z is substituted 5- or 6-membered heteroaryl, having from 1 to 3 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted C₁₋₈ alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, and unsubstituted or substituted 3- to 7-membered heterocyclyl.

31. The compound of claim 2, where Z represents unsubstituted or substituted 6-membered heteroaryl with carbon and up to 3 nitrogen atoms and with from 1 to 3 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or

substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted C₁₋₈ alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, and unsubstituted or substituted 5- and 6-membered heteroaryl.

32. The compound of claim 2, where Z is unsubstituted or substituted 6-membered heteroaryl with carbon and 1 to 2 nitrogen atoms and with 1 or 2 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₁₋₆ alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted 3 to 7-membered heterocycyl, and unsubstituted or substituted 5- or 6-membered heteroaryl.

33. The compound of claim 2, where Z is selected from the group consisting of unsubstituted or substituted pyridyl, unsubstituted or substituted pyrimidinyl, unsubstituted or substituted pyridazinyl, and unsubstituted or substituted pyrazinyl.

34. The compound of claim 33, where Z is selected from the group consisting of substituted pyridyl, substituted pyrimidinyl, substituted pyridazinyl, and substituted pyrazinyl, and where at least one ring nitrogen is substituted with =O.

35. The compound of claim 2, where Z is pyridinyl with from 0 to 3 substituents; pyrimidinyl with from 0 to 3 substituents; pyrazinyl with from 0 to 3 substituents; or pyridazinyl with from 0 to 3 substituents.

36. The compound of claim 2, where Z is substituted with at least one substituent located *ortho* to one of the heteroatoms in the ring or directly connected to a ring heteroatom.

37. The compound of claim 28, where the substituent on Z is unsubstituted C₁₋₈ alkyl, unsubstituted C₃₋₈ cycloalkyl, unsubstituted C₂₋₈ alkenyl, unsubstituted C₂₋₈ alkynyl or unsubstituted C₁₋₈ alkoxy, unsubstituted C₆₋₁₀ aryl, unsubstituted 3- to 7-membered heterocyclyl, and 3- to 7-membered heteraryl.

38. The compound of claim 28, where the substituent on Z is substituted C₁₋₈ alkyl, substituted C₃₋₈ cycloalkyl, substituted C₂₋₈ alkenyl, substituted C₂₋₈ alkynyl or substituted C₁₋₈ alkoxy, each having from 1 to 5 substituents independently selected from the group consisting of halogen, -OH, -OR⁷, -CN, -NO₂, =O, -CN, -NO₂, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, or unsubstituted or substituted 3- to 6-membered heterocyclyl.

39. The compound of claim 28, where the substituent on Z is substituted C₁₋₈ alkyl, substituted C₃₋₈ cycloalkyl, substituted C₂₋₈ alkenyl, substituted C₂₋₈ alkynyl or substituted C₁₋₈ alkoxy groups, each having from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR⁷, =O, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, and unsubstituted or substituted 3- to 6-membered heterocyclyl.

40. The compound of claim 28, where the substituent on Z is substituted C₁₋₈ alkyl, substituted C₃₋₈ cycloalkyl, substituted C₂₋₈ alkenyl, substituted C₂₋₈ alkynyl or substituted C₁₋₈ alkoxy groups, each having from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR⁷, =O, -C(O)R⁷, -CO₂R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted 5- or 6-membered heteroaryl, and 3- to 6-membered heterocyclyl.

41. The compound of claim 28, where the substituent on Z is substituted aryl, substituted heteroaryl or substituted heterocyclyl, each having from 1 to 5 substituents independently selected from the group consisting of halogen, -OH, -OR⁷, -CN, -NO₂, =O, -CN, -NO₂, -OC(O)R⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸ and unsubstituted or substituted 5- or 6-membered heteroaryl, and 3- to 6-membered heterocyclyl.

42. The compound of claim 28, where the substituent on Z is substituted phenyl or substituted heteroaryl, each having from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR⁷, -CN, -NO₂, =O, -CN, -NO₂, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₁₋₈ haloalkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, and 3- to 6-membered heterocyclyl.

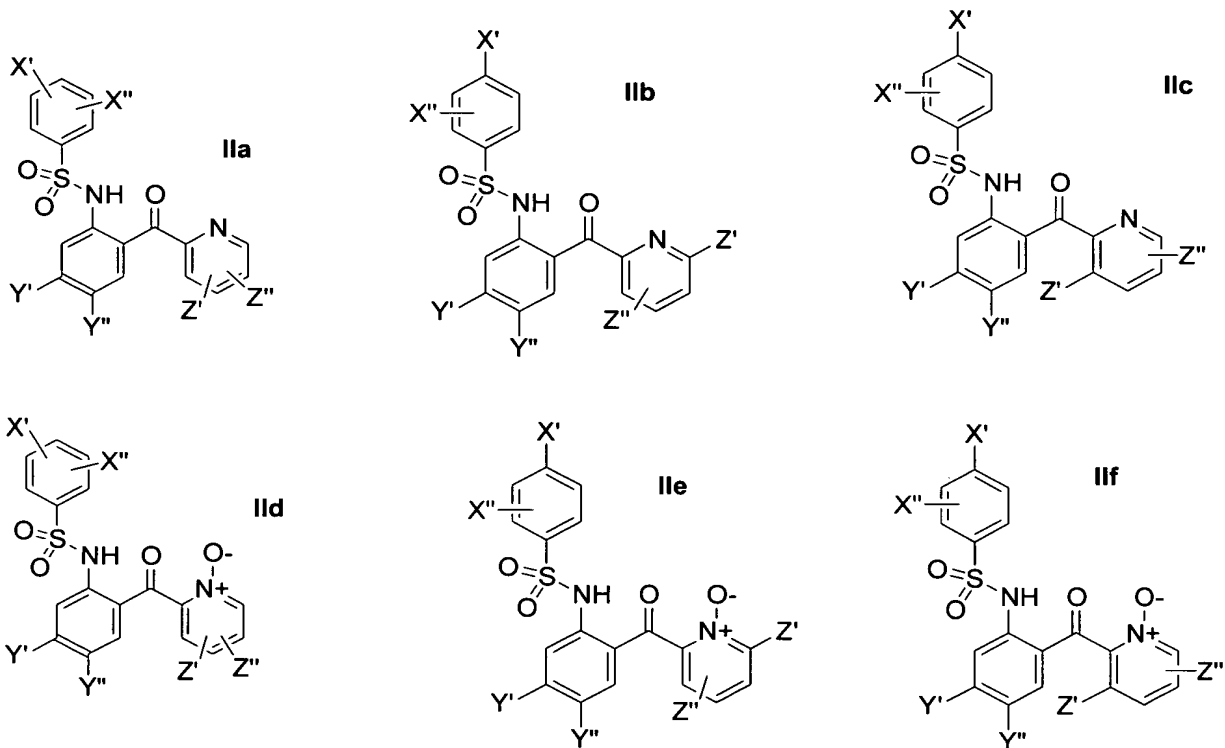
43. The compound of claim 28, where the substituent on Z is unsubstituted or substituted heterocyclyl having from 1 to 2 substituents independently selected from the group consisting of unsubstituted or substituted C₁₋₈ alkyl, C₁₋₈ haloalkyl, -OR⁷, -OH, -C(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, and -SO₂R⁷.

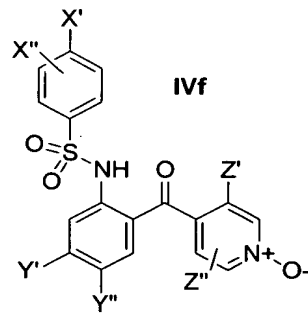
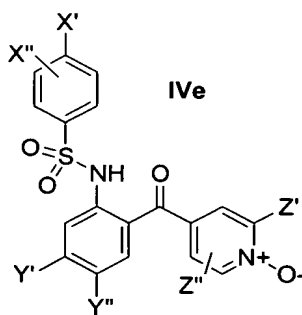
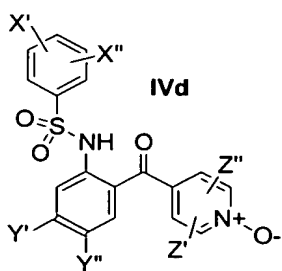
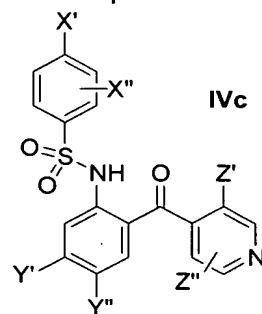
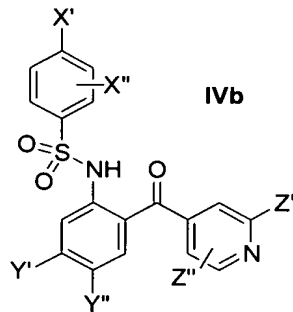
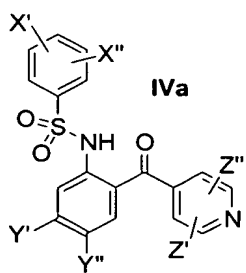
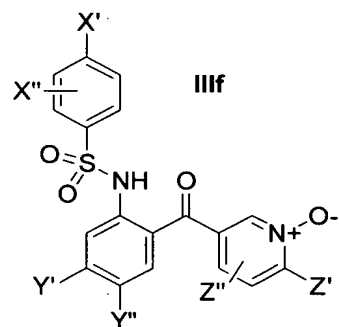
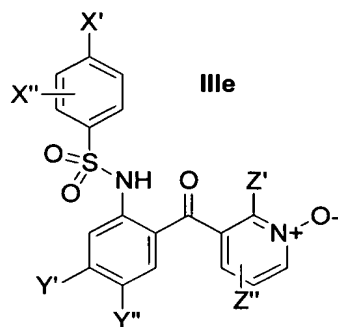
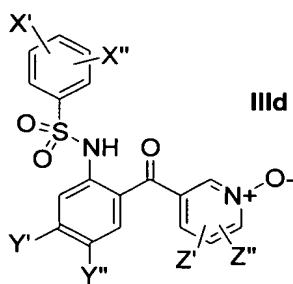
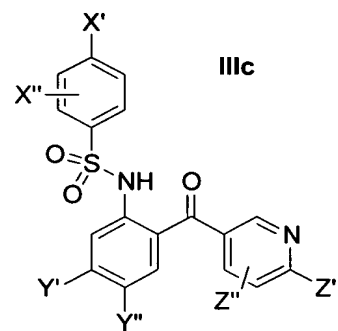
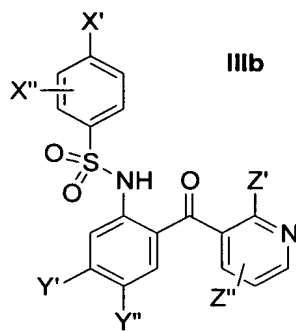
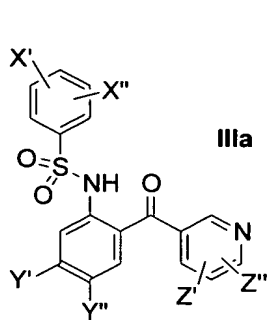
44. The compound of claim 28, where each R⁷, R⁸ and R⁹ is unsubstituted.

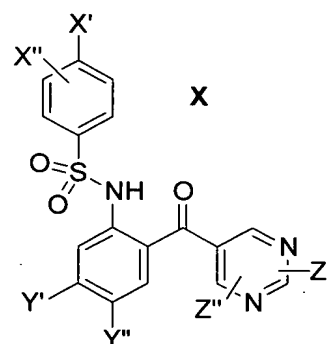
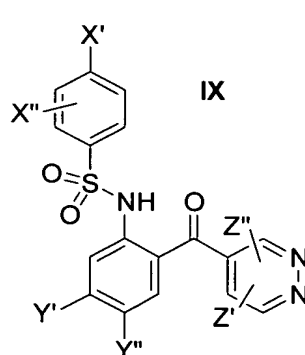
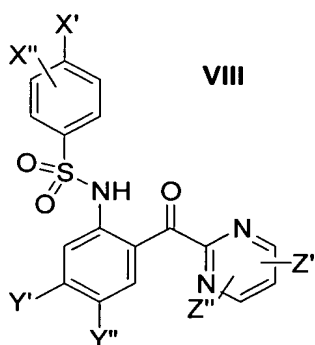
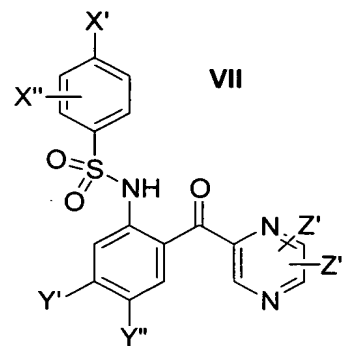
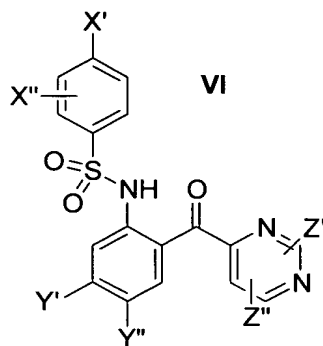
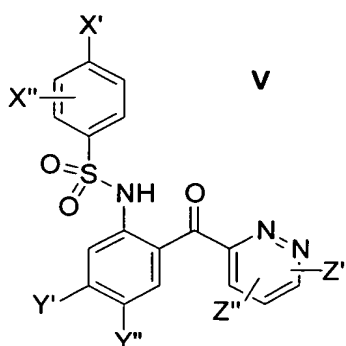
45. The compound of claim 28, where each R⁷, R⁸ and R⁹, when substituted, can have from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR', -OCONHR', -OCONR'₂, -SH, -SR', -CN, -SO₂NH₂, -CONH₂, -NHC(O)NH₂, -NR'C(O)NH₂, -CO₂H, -NO₂, -NH₂, -NHR' and -NR'₂, -S(O)R', -S(O)₂R', -CO₂R', -CONR'₂, -CONHR', -C(O)R', -NR'COR', -NHCOR', -NR'CO₂R', -NHCO₂R', -CO₂R', -NR'C(O)NR'₂, -NHC(O)NR'₂, -NR'C(O)NHR', -NHC(O)NHR', -NR'SO₂R', -NHCO₂R', -SO₂NR'₂, and -SO₂NHR', where R' is C₁₋₆alkyl.

46. The compound of claim 3, where Y represents from 1 to 3 substituents, each independently selected from the group consisting of halogen, -CN, -NO₂, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴, and unsubstituted or substituted C₁₋₄ alkyl.
47. The compound of claim 3, where at least one Y is halogen.
48. The compound of claim 46, where X is C₁₋₈ alkyl.
49. The compound of claim 3, where Z represents unsubstituted or substituted, monocyclic or bicyclic C₅₋₁₀ heteroaryl or unsubstituted or substituted, monocyclic or bicyclic C₃₋₁₀ heterocyclyl.
50. The compound of claim 3, where Z is pyridinyl with from 0 to 3 substituents; pyrimidinyl with from 0 to 3 substituents; pyrazinyl with from 0 to 3 substituents; or pyridazinyl with from 0 to 3 substituents.
51. The compound of claim 49, where X is C₁₋₈ alkyl.
52. The compound of claim 17, where Z represents unsubstituted or substituted, monocyclic or bicyclic C₅₋₁₀ heteroaryl or unsubstituted or substituted, monocyclic or bicyclic C₃₋₁₀ heterocyclyl.
53. The compound of claim 17, where Z is pyridinyl with from 0 to 3 substituents; pyrimidinyl with from 0 to 3 substituents; pyrazinyl with from 0 to 3 substituents; or pyridazinyl with from 0 to 3 substituents.
54. The compound of claim 52, where at least one Y is halogen.
55. The compound of claim 46, where Z represents unsubstituted or substituted, monocyclic or bicyclic C₅₋₁₀ heteroaryl or unsubstituted or substituted, monocyclic or bicyclic C₃₋₁₀ heterocyclyl.
56. The compound of claim 46, where Z is pyridinyl with from 0 to 3 substituents; pyrimidinyl with from 0 to 3 substituents; pyrazinyl with from 0 to 3 substituents; or pyridazinyl with from 0 to 3 substituents.

57. The compound of claim 56, where X is C₁₋₈ alkyl.
58. The compound of claim 56, where at least one Y is halogen.
59. The compound of claim 2, which has one of the following formulae:







where X' and X'' are each independently selected from the group consisting of hydrogen, halogen, $-CN$, $-NO_2$, $-OH$, $-OR^1$, $-C(O)R^1$, $-CO_2R^1$, $-O(CO)R^1$, $-C(O)NR^1R^2$, $-OC(O)NR^1R^2$, $-SR^1$, $-SOR^1$, $-SO_2R^1$, $-SO_2NR^1R^2$, $-NR^1R^2$, $-NR^1C(O)R^2$, $-NR^1C(O)_2R^2$, $-NR^1SO_2R^2$, $-NR^1(CO)NR^2R^3$, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{1-8} haloalkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkynyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{6-10} aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl, with the proviso that X' and X'' cannot both be hydrogen simultaneously;

R^1 , R^2 and R^3 are each independently selected from the group consisting of hydrogen, C_{1-6} haloalkyl, C_{1-6} alkyl, C_{3-6} cycloalkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{6-10} aryl, 5- to 10-membered heteroaryl, aryl- C_{1-4} alkyl, aryl- C_{1-4} alkyl, and aryloxy- C_{1-4} alkyl; or

two of R^1 , R^2 and R^3 together with the atom(s) to which they are attached, may form a 5-, 6- or 7- membered ring;

Y' and Y'' are each independently selected from the group consisting of hydrogen, halogen, -CN, -NO₂, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴, unsubstituted or substituted C₁₋₄ alkyl, and unsubstituted or substituted C₁₋₄ haloalkyl, with the proviso that Y' and Y'' cannot both be hydrogen simultaneously;

R^4 is selected from the group consisting of hydrogen, unsubstituted or substituted C₁₋₆ haloalkyl, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₃₋₆ cycloalkyl, unsubstituted or substituted C₂₋₆ alkenyl, and unsubstituted or substituted C₂₋₆ alkynyl;

Z' and Z'' are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted C₁₋₈ alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted C₆₋₁₀ aryl, unsubstituted or substituted 5- or 6-membered heteroaryl and unsubstituted or substituted 3- to 7-membered heterocyclyl; and

where R^7 , R^8 and R^9 are each independently hydrogen, unsubstituted or substituted C₁₋₆ haloalkyl, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₃₋₆ cycloalkyl, unsubstituted or substituted C₂₋₆ alkenyl, unsubstituted or substituted C₂₋₆ alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heteroaryl, unsubstituted or substituted aryl-C₁₋₄ alkyl, and unsubstituted or substituted aryloxy-C₁₋₄ alkyl; or

where any two of R^7 , R^8 and R^9 together with the atom(s) to which they are attached, may form a 5-, 6- or 7- membered ring.

60. The compound of claim 59, where X' and X'' are each independently selected from the group consisting of hydrogen, -NO₂, -OR¹, -C(O)R¹, -SO₂R¹,

-NR¹R², unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₁₋₈ haloalkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 5- or 6-membered heterocyclyl, with the proviso that X' and X'' cannot both be hydrogen simultaneously.

61. The compound of claim 59, where X' and X'' are each independently selected from the group consisting of hydrogen, -CF₃, -CH=CH₂, isoamyl, phenylacetylene, t-butyl, ethyl (Et), i-propyl (ⁱPr), -C(CH₃)₂CH₂CH₃, hydroxybutyl, -C(CH₃)₂CH₂CH₂OH, -CH₂CH₂CO₂Me, -OCF₃, -OMe, -O-ⁱPr, -C(O)Me, -SO₂Me, phenyl (Ph), -OEt, pyrazole, oxazole, and morpholinyl, with the proviso that X' and X'' cannot both be hydrogen simultaneously.

62. The compound of claim 59, where Y' and Y'' are each independently hydrogen or halogen, with the proviso that one or both are halogen.

63. The compound of claim 62, where Y' is hydrogen and Y'' is chloro; Y' and Y'' are both fluoro; Y' is hydrogen and Y'' is fluoro; or Y' is hydrogen and Y'' is bromo.

64. The compound of claim 59, where at least one of Y' or Y'' is a halogen atom and is para to the sulfonamide bond in formula (I).

65. The compound of claim 59, where Z' and Z'' are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₁₋₈ cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, unsubstituted or substituted C₆₋₁₀ aryl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycl.

66. The compound of claim 59, where Z' and Z'' are each independently hydrogen, halogen, -CN, -OR⁷, -NR⁷R⁸, -SR⁷, -SOR⁷, and -SO₂R⁷,

unsubstituted or substituted C₁₋₆ alkoxyl, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted 5- or 6-membered heterocyclyl.

67. The compound of claim 60, where Y' and Y'' are each independently hydrogen or halogen, with the proviso that one or both are halogen.

68. The compound of claim 60, where Z' and Z'' are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₁₋₈ cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, unsubstituted or substituted C₆₋₁₀ aryl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycl.

69. The compound of claim 62, where Z' and Z'' are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₁₋₈ cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, unsubstituted or substituted C₆₋₁₀ aryl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycl.

70. The compound of claim 67, where Z' and Z'' are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₁₋₈ cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, unsubstituted or substituted C₆₋₁₀ aryl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycl.

71. A composition comprising a pharmaceutically acceptable carrier and a compound of claim 2.

72. A method for treating a CCR9-mediated condition or disease comprising administering to a subject a safe and effective amount of the compound of claim 2.
73. The method of claim 72, where the CCR9-mediated disease or condition is an inflammatory condition.
74. The method of claim 72, where the CCR9-mediated disease or condition is an immunoregulatory disorder.
75. The method of claim 72, where the CCR9-mediated condition or disease is inflammatory bowel disease.
76. The method of claim 72, where the CCR9-mediated condition or disease is selected from the group consisting of an allergic disease, psoriasis, atopic dermatitis, asthma, fibrotic diseases and graft rejection.
77. The method of claim 72, where the CCR9-mediated condition or disease is selected from the group consisting of immune mediated food allergies and autoimmune diseases.
78. The method of claim 72, where the CCR9-mediated condition or disease is Celiac disease or rheumatoid arthritis.
79. The method of claim 72, where the administering is oral, parenteral, rectal, transdermal, sublingual, nasal or topical.
80. The method of claim 72, where the compound is administered in combination with an anti-inflammatory or analgesic agent.
81. A method of modulating CCR9 function in a cell, comprising contacting the cell with a CCR9 modulating amount of the compound of claim 2.
82. The method of claim 72, further comprising administering an anti-inflammatory or analgesic agent.

83. The method of claim 72, where the CCR9-mediated disease or condition is a leukemia or a solid tumor.
84. The method of claim 72, where the CCR9-mediated disease or condition is thymoma or a thymic carcinoma.
85. The method of claim 72, where the CCR9-mediated disease or condition is acute lymphocytic leukemia.